HABITAT MANAGEMENT AREAS



The management objective of habitat management areas is to provide or enhance habitat (upland, wetland, or aquatic) to support specific species of plants or animals. Habitats and communities with this designation are managed for a wide variety of purposes, including focused species production and protection.

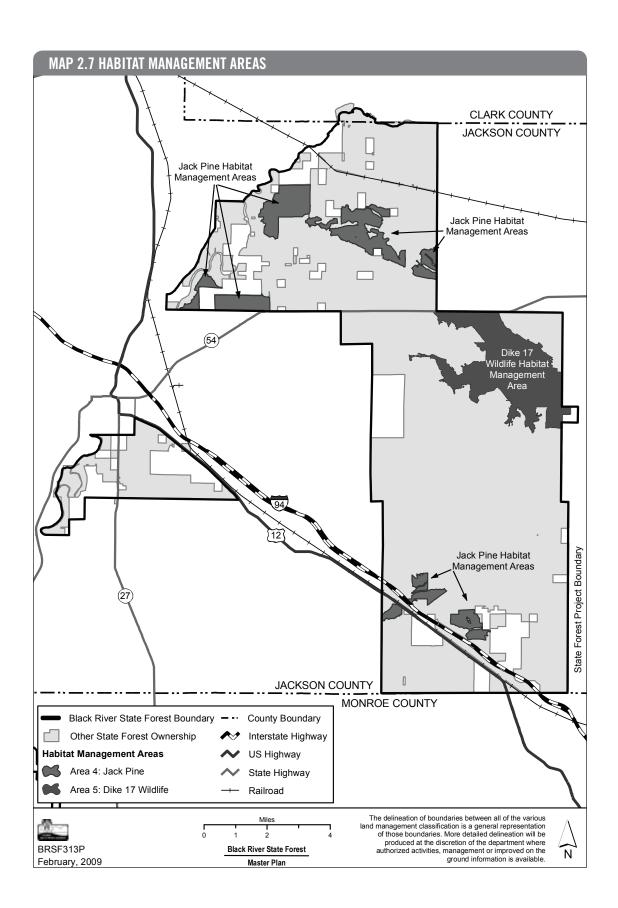
Examples of management activities within habitat management areas are dependent upon the habitat or species type included. Management could potentially include timber harvesting, herbicide application, mowing, burning, road construction, site preparation, planting, and/or erosion control.

TABLE 2.6 HABITAT MANAGEMENT AREAS					
Area #	Habitat Management Areas	Acres			
4	Jack Pine	4,277			
5	Dike 17 Wildlife	4,999			
	Total	9,276			

Please refer to the General Forest Management Prescriptions on page 98 for prescriptions by forest type. These prescriptions apply and all management activities are authorized, except as noted below for these management areas.



HABITAT MANAGEMENT AREAS



AREA 4: JACK PINE AREA

This 4,277 acre habitat management area is primarily located within two regions of the property and is comprised of several non-connected parcels ranging in size from 100 to 2,000 acres. The largest Jack Pine Habitat Management Area is located in a narrow band approximately five miles long and immediately north of High Bank Road and Staffon Road. The second is located approximately one mile north of the Town of Millston. The area contains a significant jack pine resource and associated barrens native community. The area is known to contain one federally endangered animal species, two state threatened plant species, numerous Species of Special Concern, and numerous Species of Greatest Conservation Need.

Description of the Forest Resource

The most common timber types in this area are jack pine and red pine. Other timber types such as aspen, white pine, and red maple also occur, but are less common.

Much of the area was impacted by jack pine budworm in the early and mid 1990s and was subsequently salvaged. The majority of the impacted area was replanted primarily to jack pine and some red pine with mixed results. On the driest sites, recent droughts have thwarted regeneration attempts, leaving areas of various sizes void of trees. Drought has also affected older jack pine stands, resulting in decline. Some of these stands were harvested in 2006.

Long-Term Management Objectives (100 years)

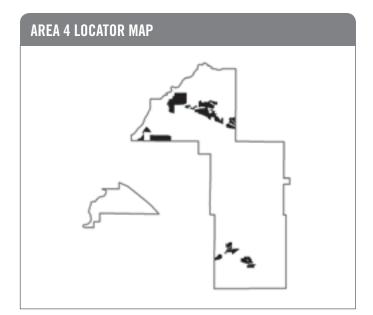
Establish a relatively even distribution of age classes dominated by jack pine, with mixed areas of red pine and scrub oak. Maintain some areas primarily for their prairie/barrens associated plants and animals, while managing other areas for continuous mill products. Diversity in tree density and age class will provide continuous mill product and critical habitat for barrens associated plants and animals.

Short-Term Management Objectives (50 years)

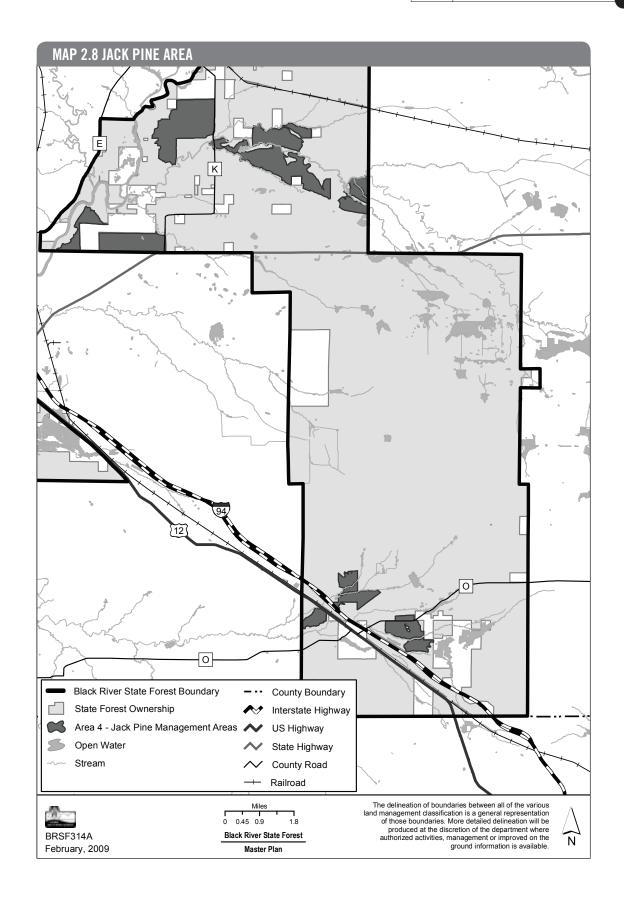
- Convert red pine plantations to jack pine or a mix of jack pine, red pine, and scrub oak at rotation.
- Maintain jack pine component on all sites except those designated and maintained in a treeless, grassy condition.
- Protect, maintain, and increase barrens vegetation in designated areas with specific emphasis on rare plants.
- Protect, maintain, and increase barrens habitat associated animals, with specific emphasis on rare birds, invertebrates, and reptiles.
- Increase connection between patches of barrens vegetation

AREA 4 SUMMARY

- ▲ Maintain and increase jack pine community type.
- **A** Manage the state and globally imperiled pine barrens natural community sites for ecological values and rare species habitat needs.
- **A** Use prescribed fire as a management tool in a habitat type historically shaped by fire.
- ▲ Maintain small wetlands and non-barrens habitat.



HABITAT MANAGEMENT AREAS **JACK PINE AREA**



Area Specific Resource Management Prescriptions

- Actively manage red pine stands primarily through thinning. Prior to and/or at rotation, use herbicide and/or prescribed fire to reduce oak component where necessary for site preparation, and to stimulate and improve barrens vegetation near stand edges and within smaller stands.
- Actively manage jack pine stands primarily through clearcutting, using a shifting mosaic methodology which distributes harvests throughout the area to provide a wide age class distribution. Use a variety of regeneration techniques such as natural, direct seeding, planting, seed trees, and prescribed fire.
- Identify and designate high quality barrens vegetation sites to be maintained as permanent openings of variable size. Attempt to dovetail these sites with areas where dry soils make it difficult to grow/regenerate trees (lowest site index) and where rare species are concentrated. These sites may be incorporated into the Karner Blue Butterfly Management Plan. Periodically use prescribed fire, mechanical brushing, and selective use of herbicides using DNR guidelines to minimize impacts on sensitive species.
- Identify high quality barrens vegetation sites to be maintained in conjunction with timber production. These sites may be incorporated into the Karner Blue Butterfly Management Plan. Use existing DNR screening guidance to minimize impacts on sensitive species.
- Mechanical brushing, selective use of herbicide, and prescribed fire could be potentially useful management tools for improving understory species diversity as well as site preparation for regeneration at rotation. When planting, use variable densities and techniques to promote patchiness of variable sizes that will maintain some openings within some stands as they mature.
- Use timber harvesting, brushing, and selected herbicides along roadsides and between stands to develop vegetative corridors and to maintain or increase width of open areas. Consider augmenting species diversity with seed collected from nearby areas that would provide host plants and nectar sources for rare species maintenance and dispersal.

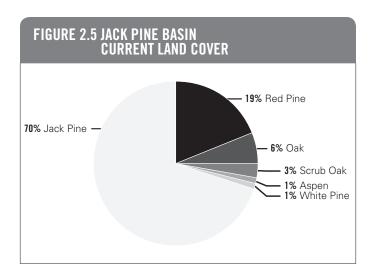
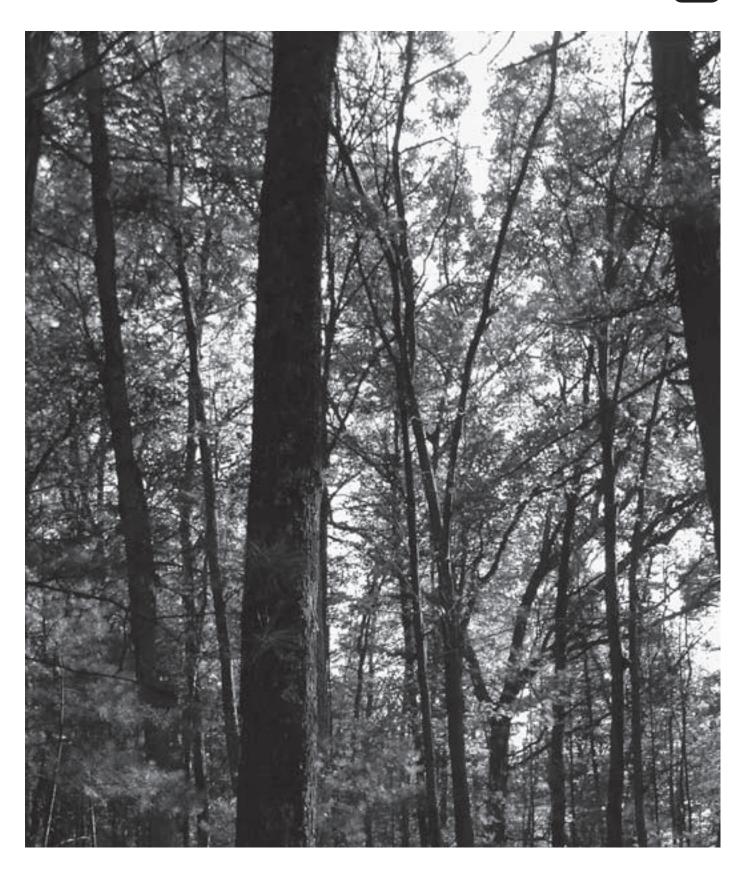


TABLE 2.7 JACK PINE AREA CURRENT AND PREDICTED LAND COVER								
Cover Type	CURI	RENT	PREDICTED 50 YEAR					
Cover Type	Acres	% Total	Acres	% Total				
Forested Types								
Jack Pine	2,995	70%	2,822	66%				
Red Pine	818	19%	799	19%				
Oak	236	6%	216	5%				
Scrub Oak	129	3%	129	3%				
Aspen	49	1%	27	1%				
White Pine	35	1%	76	2%				
Red Maple	10	0%	10	0%				
Non-forested Types								
Grassland	5	0%	198	4%				
Total	4,277	100%	4,277	100%				



HABITAT MANAGEMENT AREAS DIKE 17 WILDLIFE HABITAT MANAGEMENT AREA



AREA 5: DIKE 17 WILDLIFE

HABITAT MANAGEMENT AREA

In 2008, the Dike 17 Wildlife Habitat Management Area was 3,700 acres in size, with 2,100 acres protected as a refuge. The refuge is closed annually to the public from September 1st to December 31st, except during gun deer season. This area is located south of Highway 54, west of North Settlement Road, east of Wildcat Road, and north of the old railroad grade. The area was originally created to provide waterfowl resting and loafing areas through creation and maintenance of 13 flowages, and to provide an open landscape within the state forest for Sharp-tailed Grouse habitat.

Description of the Forest Resource

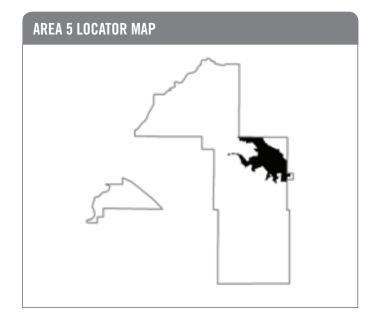
This area is comprised of both sandy and peat soils. Vegetation is mostly (about 80%) a mix of marsh, lowland brush or keg, grassland, and open water, with scattered stands of oak, jack pine, and aspen making up the remainder.

Short- and Long-Term Management Objectives (50-100 years)

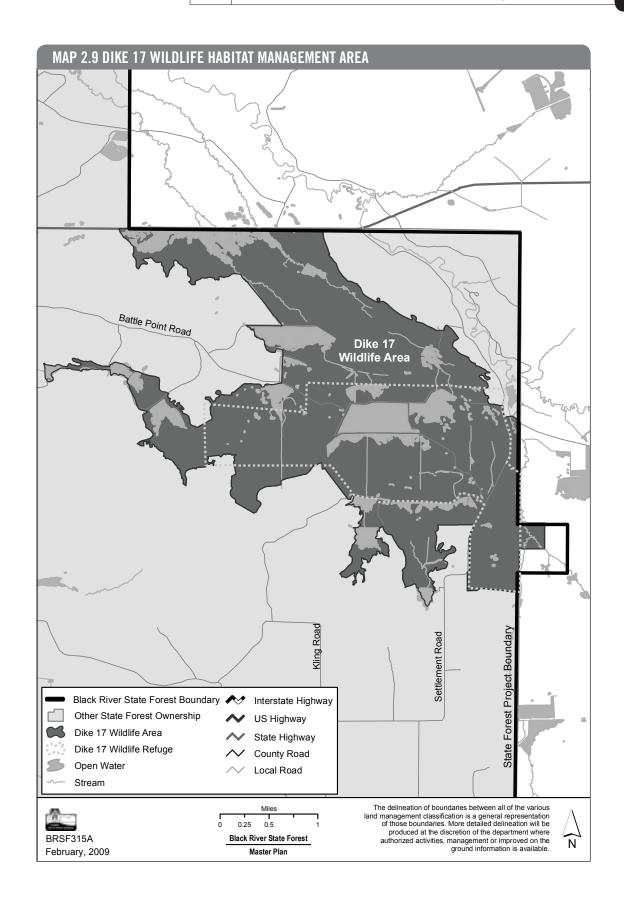
- Provide approximately 5,000 acres of high quality, ecologically functional grass, shrub, barrens and wetland habitats for waterfowl, Sharp-tailed Grouse, and a variety of endangered, threatened, special concern, and rare species, such as the Karner blue butterfly, Northern Harrier, Whooping Crane, American Bittern, Black Meadow Hawk, Blandings turtle, and frosted elfin.
- Provide a protected resting, loafing, and nesting area for waterfowl, including the federally endangered Whooping Crane, in balance with providing public use opportunities.
- Provide opportunities for hunting big game, waterfowl, small game, and upland game birds.
- Provide trapping opportunities.
- · Provide opportunities for viewing birds and other wildlife, for nature study, and for hiking.
- Provide opportunities for non-motorized boating and paddling on flowages and ponds.

AREA 5 SUMMARY

- ▲ Expand the existing wildlife area from 3,700 acres to 4,999 acres.
- ▲ Continue focus on waterfowl management through maintenance and manipulation of flowages and impounded water.
- A Continue Sharp-tailed Grouse habitat management.
- A Perpetuate open landscape through aggressive timber harvesting and prescribed burning.
- ▲ Provide hunting, fishing, and trapping opportunities, as well as compatible uses such as hiking, picnicking, and wildlife viewing.
- ▲ Increase acreage open to hunting.
- A Provide opportunities to manage for threatened and endangered species.



DIKE 17 WILDLIFE HABITAT MANAGEMENT AREA



HABITAT MANAGEMENT AREAS





Area Specific Resource Management Prescriptions

- Increase the existing wildlife management area from 3,700 acres to 4,999 acres to include additional adjacent flowages and lands on the state forest that are suitable for management as open-land brush/grass.
- Maintain established open brush/grass cover type at a maximum height of approximately five feet.
- Convert and maintain up to 10% of forested sites to open brush/grass cover type. Use aggressive management techniques such as cutting/shearing, timber harvesting, prescribed burning, herbicides, and planting native prairie plants.
- Retain and maintain all flowages within the management area, unless abandonment, on a case-by-case basis, is deemed appropriate by a multi-resource team. Dike maintenance includes cutting, shearing, mowing, and similar mechanical treatments, repair of rodent or other damage, and repair or replacement of water control structures.
- Manipulate water levels to provide optimum waterfowl habitat by maintaining pools with a water depth from three to six feet, and performing periodic full drawdowns of each pool to promote plant growth approximately every four years.
- Attempt to establish wild rice in flowages for a renewable food resource for waterfowl and for recreational and cultural gathering.
- Plant up to 128 acres of food plots that are consistent with forest certification requirements.
- Maintain a network of primitive or lightly developed roads for management access.
- Recommend an increase in the acreage open for hunting and other public uses by decreasing the acreage of the wildlife refuge. This is based on a lower number of birds currently migrating compared to when the refuge was first established. Wildlife refuge sizes and boundaries are outside of the scope of this master plan and are designated in Administrative Code. This change is a recommendation only.
- · Maintain at least one parking lot for public access to the
- Maintain public access into the management area by foot travel only.
- Provide interpretive signs and materials for public information about the management area.
- Promote wildlife watching and nature study.
- Evaluate the use of the Dike 17 Wildlife Area observation tower and determine the need for renovation, replacement, or removal.

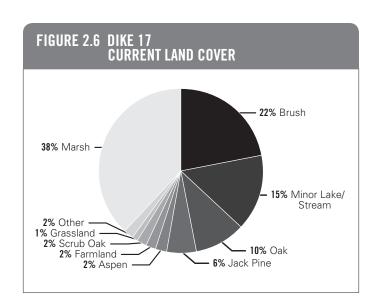


TABLE 2.8 DIKE 17 CURRENT AND PREDICTED LAND COVER								
Cover Type	CURRENT		PREDICTED 50 YEAR					
Cover Type	Acres	% Total	Acres	% Total				
Forested Types								
Oak	478	10%	430	9%				
Jack Pine	307	6%	277	5%				
Aspen	129	2%	129	2%				
Scrub Oak	84	2%	84	2%				
	Non-for	ested Types						
Marsh	1,878	38%	1,878	38%				
Brush	1,089	22%	1,089	22%				
Minor Lake/Stream	769	15%	769	15%				
Farmland	128	2%	0	0%				
Other	83	2%	83	2%				
Grassland	54	1%	260	5%				
Total	4,999	100%	4,999	100%				

